



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

NW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,254	06/30/2000	Robert P. Knight	042390.P8659	9791

7590 11/19/2003

Walter T Kim  
Blakely Sokoloff Taylor & Zafman LLP  
7th Floor  
12400 Wilshire Boulevard  
Los Angeles, CA 90025

EXAMINER
----------

TSAI, CAROL S W

ART UNIT	PAPER NUMBER
----------	--------------

2857

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/607,254

Applicant(s)

KNIGHT, ROBERT P.

Examiner

Carol S Tsai

Art Unit

2857

MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/08/2003 has been entered.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

Art Unit: 2857

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 4, 5, 8-10, 13, 14, and 17-19, are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,112,318 to Jouppi et al.

With respect to claims 1, 10, and 19, Jouppi et al. disclose a method comprising: providing at least one performance object (memory subsystem 106 shown on Fig. 1) containing a plurality of events (event signals 112 shown on Fig. 1) (see col. 3, lines 16-21); allowing a user to select a subset of events to be monitored during a collection session from said at least one performance object (see col. 1, lines 5-7, lines 31-36, and lines 61-67; col. 4, lines 18-38; col. 5, line 56 to col. 6, line 6; and col. 15, line 59 to col. 16, line 40); programming performance counters (counters 110 and 111 shown on Fig. 1) associated with said subset of events selected to increment in response to an occurrence of a respective event (see col. 5, lines 15-55; col. 7, line 27 to col. 9, line 35; and col. 11, line 60 to col. 12, line 22); and periodically reading data stored in each of said performance counters associated with said selected subset of events during the collection session (see col. 5, lines 15-63), wherein at least one of the performance counters associated with the selectable events is implemented using a hardware register (see col. 4, line 66 to col. 5, line 29) and at least another one of the performance counters associated with the selectable events is implemented using a software variable (see col. 5, line 56 to col. 6, line 65 and col. 16, line 52 to col. 17, line 31).

Jouppi et al. do not disclose expressly such that counters associated with events that are not selected from said at least one performance object are not incremented during the collection session, but it is considered inherent, because “counters associated with events that are selected

from said at least one performance object are incremented during the collection session” disclosed by Jouppi et al is logically meant by “counters associated with events that are not selected from said at least one performance object are not incremented during the collection session” since the action of “incrementing” could never be activated if the action of “selecting” is not activated.

As to claims 4 and 5, Jouppi et al. also disclose said subset of events selected by the user including at least one of said plurality of events contained in said at least one performance object (see col. 4, line 66 to col. 5, line 14 and col. 5, lines 56-63).

As to claims 8, 9, 17, and 18, Jouppi et al. also disclose said subset of events selected by the user including at least one event (“cache misses” disclosed at col. 1, line 35) associated with a hardware component (see col. 1, lines 31-36) and at least one event associated with a user application (“an application program” disclosed at col. 1, line 66) (see Abstract, lines 4-7; col. 1, lines 61-67; col. 3, lines 36-47; col. 4, lines 5-17; and col. 5, line 46 to col. 6, line 23).

As to claim 13, Jouppi et al. also disclose displaying names and descriptions of each event associated with the performance object (see TABLE B).

As to claim 14, Jouppi et al. also disclose allowing the user to configure when the respective performance counter is incremented (see col. 7, line 36 to col. 9, line 35 and col. 11, line 60 to col. 12, line 22).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2857

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi et al. in view of (“Your Right to Know; Finding Leaks and Bottlenecks with a Windows NT Perfmon COM Object”, Microsoft Corporation, January 1999) to Anderson.

As noted above, with respect to claims 6 and 7, Jouppi et al. disclose the claimed invention, except for at least one of the events in the performance object having at least one customization option associated therewith; and said method further comprising allowing the user to customize performance data collection of said at least one of the events by selecting said at least one customization option associated therewith.

Anderson teaches at least one of the events in the performance object having at least one customization option associated therewith; and said method further comprising allowing the user to customize performance data collection of said at least one of the events by selecting said at least one customization option associated therewith (see Figure 2 and page 5, Specialized and Custom Counters).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jouppi et al.’s method to include at least one of the events in the performance object having at least one customization option associated therewith; and said method further comprising allowing the user to customize performance data collection of said at least one of the events by selecting said at least one customization option associated therewith, as taught by Anderson, because allowing the user to creating his won performance counters can reduce object creation overhead in order to tune the caching algorithm based on server memory,

load, disk speed, and so on (see Anderson page 5, lines 6-8 of Specialized and Custom Counters).

7. Claims 15, 16, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi et al. in view of U. S. Patent No. 6,098,169 to Ranganathan.

As noted above, with respect to claims 15, 16, and 20-24, Jouppi et al. disclose the claimed invention, except for the programming of the performance counters being accomplished by a performance dynamic link library (performance DLL) which sends commands to a respective performance counter residing in a hardware component via a respective device driver to count the occurrence of a respective event.

Ranganathan teaches the programming of the performance counters being accomplished by a performance dynamic link library (performance DLL) which sends commands to a respective performance counter residing in a hardware component via a respective device driver (device driver 35 shown on Fig. 2) to count the occurrence of a respective event (see col. 4, line 12 to col. 5, line 4 and col. 6, line 23 to col. 8, line 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jouppi et al.'s system to include the programming of the performance counters being accomplished by a performance dynamic link library (performance DLL) which sends commands to a respective performance counter residing in a hardware component via a respective device driver to count the occurrence of a respective event, as taught by Ranganathan, in order that device driver can gather the appropriate performance data which it maintains in its internal data structures and places this performance data in the buffer that was

passed to it and can also repackage the performance data and return it to performance monitoring application for rate-conversion (i.e., change in counter value divided by change in time) and display (see Ranganathan col. 4, line 59 to col. 5, line 4).

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi et al. and Ranganathan as applied to claims 19-21 and 23 above, and further in view of ("Your Right to Know; Finding Leaks and Bottlenecks with a Windows NT Perfmon COM Object", Microsoft Corporation, January 1999) to Anderson.

As noted above, Jouppi et al. in combination with Ranganathan teach all the features of the claimed invention, but do not disclose generating a new name for a particular event if collection thereof has been customized.

Anderson teaches generating a new name for a particular event if collection thereof has been customized (see Figure 2 and page 5, Specialized and Custom Counters).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jouppi et al. in combination with Ranganathan's system to include generating a new name for a particular event if collection thereof has been customized, as taught by Anderson, in order to help the user easily identify the type and function of the event based on the new declaration of the event-name.

9. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi et al. in view of Anderson as applied to claims 1 and 6 above, and further in view of U. S. Patent No. 5,881,223 to Agrawal et al.



Art Unit: 2857

As noted above, with respect to claims 26 and 27, Jouppi et al. in combination with Anderson teach all the features of the claimed invention, but do not disclose programming at least one of the performance counters associated with said at least one of the customized events to increment only when said at least one of the customized events occurs during a operating system privilege level.

Agrawal et al. teach programming at least one of the programming at least one of the performance counters associated with said at least one of the customized events to increment only when said at least one of the customized events occurs during a operating system privilege level (see col. 4, lines 39-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jouppi et al. in combination with Anderson's method to include programming at least one of the performance counters associated with said at least one of the customized events to increment only when said at least one of the customized events occurs during a operating system privilege level, as taught by Agrawal et al., in order that operating system users have the privilege to count events (see Agrawal et al. col. 4, lines 53-54).

10. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi et al. in view of U. S. Patent No. 5,881,223 to Agrawal et al.

As noted above, with respect to claims 28 and 29, Jouppi et al. disclose the claimed invention, except for programming at least one of the performance counters associated with said at least one of the customized events to increment only when said at least one of the customized events occurs during a operating system privilege level.

Agrawal et al. teach programming at least one of the programming at least one of the performance counters associated with said at least one of the customized events to increment only when said at least one of the customized events occurs during a operating system privilege level (see col. 4, lines 39-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Jouppi et al.'s system to include programming at least one of the performance counters associated with said at least one of the customized events to increment only when said at least one of the customized events occurs during a operating system privilege level, as taught by Agrawal et al., in order that operating system users have the privilege to count events (see Agrawal et al. col. 4, lines 53-54).

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1, 4-10, and 13-29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Worley, JR. et al. disclose a combined-hardware-and-software secure-platform interface to which operating systems and customized control programs interface within a computer system.

Davidson et al. disclose a microprocessor including a performance monitor unit.

Wiedenman et al. disclose an apparatus for monitoring the performance of a computer system.

Chan et al. disclose a system activity monitor for monitoring the performance of an electronic apparatus, e.g., a computer.

Klassen et al. disclose an apparatus and method for monitoring the performance of a microprocessor.

Pang et al. disclose an event tracing program generally receiving performance data about an event occurring on the computer system from a data producer program.

#### ***Contact Information***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. Tsai whose telephone number is (703) 305-0851. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703) 308-1677. The fax number for TC 2800 is (703) 308-7382. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (703) 308-1782.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 308-7382. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the

Application/Control Number: 09/607,254

Page 11

Art Unit: 2857

examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.



Carol S. W. Tsai  
Patent Examiner  
Art Unit 2857

11/14/03